

CLAIMS

1. Display apparatus comprising a front projection screen, at least one projector which is for providing a display on the screen and which is positioned outside an enclosed display volume, and a curved collimating mirror via which the image is viewed such that the image distance is greater than the radius of the mirror, the screen being varied in shape and/or position to vary the image distance within the total field-of-view of the display apparatus.

2. Display apparatus according to claim 1 in which the screen is of a shape and/or position that gives a short image distance on the driver's side, and in which this distance increases in straight-ahead and in kerb-side directions.

3. Display apparatus according to claim 2 in which the shape of the screen is spherical, with a relative offset to an axis of the front projection surface being shifted to reduce the image distance on the driver's side.

4. Apparatus according to claim 2 in which the shape of the screen is a complex aspheric shape.

5. Apparatus according to claim 1 in which the projectors are fixed matrix projectors.
6. Apparatus according to claim 1 in which the projectors are such that they are in groups, with each group having at least two of the projectors.
7. Apparatus according to claim 6 in which the projectors are arranged radially outside the screen.
8. Apparatus according to claim 1 and including image generator means for generating images to be displayed on the screen.
9. Apparatus according to claim 8 and including digital distortion correction means for removing distortion introduced by the optical configuration.
10. Apparatus according to claim 9 in which the digital distortion correction means is positioned between the image generator means and the projectors.
11. Apparatus according to claim 1 and including optical blending means for optically blending overlapping images from the projectors.

12. A simulator, a visualisation system or a virtual reality system including the display apparatus of claim 1.

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